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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,658	12/27/2001	Nobuyuki Matsuo	SIC-01-017	7948

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EXAMINER

LE, DAVID D

ART UNIT PAPER NUMBER

3681

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,658

Applicant(s)

MATSUO ET AL.

Examiner

David D. Le

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7, 9-34 and 39 is/are rejected.
- 7) ☒ Claim(s) 1-4, 8, 35-38 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This is the first Office action on the merits of Application No. 10/033,658, filed 27 December 2001. Claims 1-40 are pending.

Documents

1. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 12/27/01

Information Disclosure Statement

2. The examiner has considered the U. S. Patent Application Serial No. 09/522,703, which was submitted on 27 December 2001 as part of the information disclosure statement. However, the above document will not be put on the front cover of the patent because they are not considered as proper published documents.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because current Fig. 2 appears to show the planet carrier 550 as a one-piece planet carrier. However, the present specification describes the planet carrier 550 as being three separate pieces that are fastened together as shown in Fig. 4. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 8, and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5,382,203 to Bellman et al.

Claims 1-4, 8, and 35-36:

Bellman (Figs. 1-3; column 2, line 20 – 3, line 16) discloses a planetary gearset carrier assembly (10) comprising:

- A first carrier member (20);
- A plurality of planet gear openings (26);
- A plurality of planet gears (16);
- A separate second carrier member (14);
- A coupler (18);
- A pinion pin opening (28);
- A bushing (34);
- Different materials being utilized, (column 3, lines 7-16);

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellman et al.

Claims 37-38:

Bellman discloses all elements and limitations as set forth in claims 1 and 35. Regarding claims 37-38, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize the advantage of a light alloy metal and utilize material such as aluminum alloy in constructing a planetary carrier assembly, in order to reduce the overall weight of the hub transmission.

8. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,010,425 to Tabe in view of Bellman.

Claim 40:

Tabbe (Figs. 1-3, column 4, line 5 – column 6, line 67) discloses a bicycle hub transmission comprising:

- A hub axle (21);
- A driver (22);
- A hub shell (10);
- A planetary gear mechanism (24);
- A carrier (52);
- A plurality of planet gears (53);

Tabbe lacks:

- A first carrier member;
- A second carrier member;

Bellman (Figs. 1-3; column 2, line 20 – 3, line 16) discloses a planetary gearset carrier assembly (10) comprising all elements and limitations that Tabbe lacks above as recited in claim 40.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tabbe planetary carrier by constructing it in a multi-piece type planetary carrier, in view of Bellman, in order to increase the strength as well as to facilitate the ease in manufacturing this type of planetary carrier at a relatively low cost.

Allowable Subject Matter

9. Claims 5-7, 9-34, and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoo (U. S. Patent No. 5,971,884) teaches a power changing apparatus of bicycle hub comprising three carriers.

Yoo (U. S. Patent No. 6,142,904) teaches an apparatus for changing direction of driving force for bicycles comprising two sets of planetary gears and one carrier.

Mohtasham (U. S. Patent No. 6,468,178 B1) teaches a rear wheel hub for use on a bicycle comprising three planetary gear sets and one carrier.

Shoge (U. S. Patent No. 5,961,416) teaches an internally mounted bicycle transmission comprising two planetary carriers and a spline connection.

Art Unit: 3681

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 703-305-3690. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

ddl

ddl

January 30, 2003

Richard M. Lorence 10/30/03
Richard M. Lorence
Primary Examiner
AU 3681